DOCUMENT RESUME

ED 230 192 IR 010 715

TITLE Update on the School Market for Microcomputers.
INSTITUTION Market Data Retrieval, Westport, Conn.
PUB DATE Oct 82
NOTE 16p.; Some tables may not reproduce well due to small print.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Computer Assisted Instruction; Computer Programs; Databases; Elementary Secondary Education; Expenditure Per Student; *Input Output Devices; *Microcomputers; *School District Spending; School Surveys; *State Federal Aid; *Use Studies

ABSTRACT

A comparison of the findings of an annual telephone survey of all 15,000 United States public school districts, which was conducted to update a computer database, with the results of the previous year's survey indicates that microcomputer use is growing very rapidly in schools. Since the first study, the number of schools using microcomputers has increased by over 60% and the number of districts by more than 40%; over 24,000 public schools now use microcomputers in instruction. While local funding availability and larger-size schools and districts are both factors that still identify schools most likely to have microcomputers, the smaller and less well-funded schools are catching up quickly, as shown by their much higher growth rates. It is noted that the change in Chapter II funding (block grants) is apparently benefiting the microcomputer industry. Data tables are included in the report. (LMM)

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ED230192

Update on the School Market

for Microcomputers

October 1982

IR010715

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Over 24,000 U.S. public schools now use microcomputers in instruction. More than 60% of public school districts contain at least one school using a microcomputer for instruction. Since last year, the number of schools using microcomputers has increased by over 60% and the number of districts by over 40%. At present, 30% of all public school buildings use microcomputers. While senior high schools have the highest percentage of microcomputer usage, elementary schools are the fastest growing users, and the total number of elementary schools using microcomputers exceeds the number of senior high schools with microcomputers.

These findings resulted from Market Data Retrieval's annual telephone survey of all U.S. public school districts. The survey is conducted to update Market Data Retrieval's computer data base of all U.S. schools and districts, their enrollments, expenditures, and the personnel employed. The data following shows the relationship of microcomputer usage and growth trends to enrollment, expenditure and other characteristics of the schools.

DESCRIPTION

Market Data Retrieval (MDR) maintains a data base containing all public schools and school districts, private and Catholic schools, and other educational institutions. Detailed data is maintained on each institution including name and address, grades and courses taught, special facilities, phone number, enrollments, per pupil expenditures for instructional material, and other data. Public school data is maintained through an annual telephone survey of every U.S. public school district. Other data is updated through a series of compiling efforts scheduled throughout the year.

MDR also compiles and maintains personnel records (by name and function) associated with the institutions. With public school districts, superintendents and many other administrative job categories are maintained. At the school building level, principals, teachers, and librarians are

available. In all cases the data associated with the institution is also associated with the personnel, and the qualities (or jobs) of the personnel characterize the institution.

Public school data consists of 15,314 school districts managing 82,422 public school buildings. At the school district level, there are the personal names of some 125,000 administrative personnel identified by over 200,000 administrative functions, which are defined by 80 job titles. For the school buildings, there are principals and librarians by name, as well as over one and a half million teachers by name who are identified by teaching assignment, either grade level or subject specialty. MDR also captures data on Federal Funds for schools.

The data base serves a large number of successful marketers who carefully plan and then target their marketing effort, be it direct mail, in-person sales calls or, more and more these days, a telephone sales operation honing in on a target market.

One year ago, during the summer telephone updating process, MDR asked all 15,000 public school districts the following questions:

1) Which districts use computers in instruction?
2) Who recommends or buys them?
3) Which school buildings have them?

When the computer was updated and responses tabulated, MDR reported on the distribution of schools and districts with microcomputers and their relationship to all others looking at enrollments, expenditures, and other data.

MDR asked the same questions again this year and have compared the responses with last year. Those findings are the basis of this report.

FINDINGS

Schools And Districts With Microcomputers

	October '81	October '82	Increase	% Increase
Districts with Microcomputers	6,441	9,245	2,804	43.5
Schools with Microcomputers	15,318	24,696	9,378	61.2

In examining the data on districts and the relative penetration of microcomputers, there was a strong correlation a year ago between the enrollment of the district and the likelihood of microcomputer usage. In 1982, the greatest growth occurred where the least penetration was a year ago resulting in a relative leveling of distribution. However, a clear bias toward microcomputer usage remains with the larger districts. See Figure II.

If the rate of growth is examined, the smallest districts are beginning to use microcomputers at a rate almost 10 times faster than the largest, 74.9% compared to 7.6%; this is due to the higher penetration already established in the large districts. Please note, this study examines the number of districts (and schools) using microcomputers rather than the usage of microcomputers within those districts. It is a virtual certainty that the rate of usage of microcomputers within districts already having them is also growing rapidly.

The same type of pattern is also true in examining the usage of microcomputers at the school building level. When comparing usage by type of public school, the fastest growth is occurring where penetration was least, resulting in a relative flattening of the percentage of penetration. In reviewing this data (Figure III), note that the elementary schools, which still show the lowest percentage usage of microcomputers are now the biggest group of school buildings with microcomputers and represent a category with much potential for future expansion. Elementary schools (51,940) represent 63% of all public school buildings.

As might be expected, the influence of school enrollment has diminished with the increased number of schools with microcomputers. The same leveling tendency that was apparent in school districts appears with the schools, although a marked bias towards large schools remains with junior and senior high schools. As you can see in Figure IV,

the penetration of small enrollment junior highs at 25% is about half that of large school enrollments at 48%. The comparable percentages for senior highs are 43% for small and 68% for large for a 2 to 3 ratio. One year ago, the junior high ratio was 1 to 3, and for senior highs, slightly less than 1 to 2.5.

Figure II

Growth In Public School Districts With Microcomputers

	District Enrollment Size					
	Under	1,200-	2,500-	5,000-	10,000-	Total
Number of Districts	8,412	2,978	2,020	1,026	877	15,314
Number with Microcomputers in October '81	2,501	1,517	1,116	685	622	6,441
Number with Microcomputers in October '82	4,374	2,058	1,385	759	699	9,245
Increase	1,873	541	269	74	47	2,804
Percent of all Districts having Microcomputers	52.0%	69.1%	68.6%	74.0%	73.3%	60.4%
Rate of Growth	74.9%	35.7%	24.1%	10.8%	7.6%	43.5%

Figure III

Growth In Public School Buildings With Microcomputers

	Elementary	Junior High	Senior High	Special Combined	Total
Number of School Buildings	51,940	9,926	15,297	5,259	82,422
Number with Microcomputers in October '81	5,884	2,585	6,051	798	15,318
Number with Microcomputers in October '82	10,467	3,950	8,842	1,437	24,696
Increase	4,583	1,365	2,791	639	9,378
Percent of all Schools having Micro-computers	20.2%	39.8%	57.8%	27.3%	30.0%
Rate of Growth	77.9%	52.8%	46.1%	80.1%	61.2%

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Figure IV

Microcomputer Usage Compared To Building Enrollment

	School Enrollment Size					
	Under 200	200 to 299	300 to 499	500 to 999	1,000 Up	Total
Elementary & Combined						
Schools	10,895	9,065	19,874	14,047	888	54,769
Schools with Microcomputers	1,753	2,012	4,707	3,117	179	11,768
Percent	16.1%	22.2%	23.7%	22.2%	20.2%	21.5%
*Last Year %	7.9%	12.0%	13.0%	13.0%	12.4%	11.8%
Junior High						
Schools	580	752	2,127	5,203	1,264	9,926
Schools with Microcomputers	147	261	802	2,136	604	3,950
Percent	25.3%	34.7%	37.7%	41.1%	47.8%	39.8%
*Last Year %	12.9%	19.6%	21.5%	28.0%	32.5%	25.6%
Senior Year						
Schools	2,200	1,484	2,531	4,195	4,887	15,297
Schools with Microcomputers	955	740	1,306	2,416	3,325	8,842
Percent	43.4%	49.9%	51.6%	57.6%	68.0%	57.8%
* Last Year %	23.9%	31.0%	34.1%	43.2%	58.2%	42.7%

*Last year percents are not calculable from data presented because the number of schools and their enrollments have changed.

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Schools with higher proportions of poverty level families are less likely (by more than half) to use microcomputers than are the wealthiest schools. However, the usage is growing so fast that percentage penetration in the two "poorest" categories of schools this year are about equal to the percentage penetration in the two wealthiest categories last year. Consequently, if the trend persists, fast growth in microcomputer usage will continue even in the relatively poorer schools. See Figure V.

It is also worth noting for the current school year that the change in Chapter II funding, block grants, is apparently benefiting the microcomputer industry. Based on a study at Market Data Retrieval, over half of the 15,000 school districts will receive more block grant funds than from the total of the antecedant categorical grants. There are many fewer restrictions on the way the money may be spent by the districts than in the past. Apparently, many school districts intend to spend a portion of their block grant on microcomputers or related material (software or supplies). For more information about block grants, write to Market Data Retrieval and ask for a copy of the "Overview of Changes in Federal Funding for Education".

In reviewing the data related to expenditures for instructional materials (expressed on a per student basis), which consists largely of local funding, the trend seems consistent. There is a higher proportion of schools with microcomputers where schools spend more money for instructional materials. See Figure VI.

Figures VIIa and VIIb show the number of districts and schools with microcomputers in both years. The comparison is useful in determining where interest is high and where it is growing most rapidly.

Figure V

Poverty Level	Category	October 1981	October 1982
.0 - 4.9%	Schools	12,112	11,679
	Microcomputer Users	3,613	5,133
	Penetration	29.8%	44.0%
5.0 - 11.9%	Schools	26,220	25,653
	Microcomputer Users	5,606	9,002
	Penetration	21.4%	35.1%
12.0 - 24.9%	Schools	28,377	27,904
	Microcomputer Users	4,764	7,681
	Penetration	16.8%	27.5%
25.0% +	Schools	14,072	13,929
	Microcomputer Users	1,685	2,554
	Penetration	12.0%	18.3%

Figure VI

Microcomputer Usage Compared To Instructional Materials Spending

	Expenditures For Instructional Materials (per student)		
	$.00 - 29.99	$30.00 - 59.99	Over $60.00
Schools with Microcomputers in October '81	557	8,362	6,911
Schools with Microcomputers in October '82	1,077	10,530	13,036
Total schools	4,876	41,560	33,742
Schools with Microcomputers in '82 as a % of all schools	22.1%	25.3%	38.6%

Microcomputer Distribution By State

October 1981

	DISTRICTS	PUBLIC SCHOOLS
01-ALABAMA	131	1,100
	27	84
	20.61	6.25
02-ALASKA	52	406
	0	0
	0.00	0.00
03-ARIZONA	215	886
	69	191
	32.09	21.56
04-ARKANSAS	373	1,149
	87	149
	23.32	12.96
05-CALIFORNIA	1,040	7,378
	377	1,088
	36.97	14.75
06-COLORADO	185	1,276
	101	338
	54.59	26.29
07-CONNECTICUT	162	1,067
	96	227
	59.26	21.27
08-DELAWARE	20	175
	12	75
	60.00	42.86
09-DIST. OF COLUMBIA	8	189
	4	23
	50.00	12.17
10-FLORIDA	96	2,077
	70	550
	72.92	26.49
11-GEORGIA	212	1,406
	74	281
	34.91	19.23
12-HAWAII	7	231
	0	0
	0.00	0.00
13-IDAHO	116	984
	32	65
	27.59	11.73
14-ILLINOIS	1,038	4,172
	429	828
	41.04	19.85
15-INDIANA	314	2,032
	183	364
	52.55	17.91
16-IOWA	442	1,619
	282	556
	63.80	34.36
17-KANSAS	313	1,548
	182	361
	58.15	23.32
18-KENTUCKY	202	1,419
	63	173
	31.19	12.19
19-LOUISIANA	76	1,569
	28	120
	37.84	7.65
20-MAINE	269	772
	67	104
	24.91	13.47
21-MARYLAND	43	1,298
	26	299
	60.47	23.04
22-MASSACHUSETTS	423	1,918
	200	401
	47.28	20.91
23-MICHIGAN	543	3,553
	268	988
	49.36	27.74
24-MINNESOTA	499	1,630
	354	922
	70.94	56.63
25-MISSISSIPPI	197	987
	36	176
	18.27	17.83
26-MISSOURI	593	2,191
	198	299
	33.39	13.64

	DISTRICTS	PUBLIC SCHOOLS
27-MONTANA	398	739
	98	152
	24.62	20.57
28-NEBRASKA	337	1,608
	158	339
	46.88	21.08
29-NEVADA	17	201
	10	42
	58.82	14.73
30-NEW HAMPSHIRE	218	497
	40	46
	18.87	10.98
31-NEW JERSEY	592	2,399
	240	485
	40.54	20.13
32-NEW MEXICO	94	629
	37	114
	39.36	18.12
33-NEW YORK	771	4,184
	490	1,196
	63.55	28.67
34-NORTH CAROLINA	150	2,051
	78	259
	52.00	12.63
35-NORTH DAKOTA	301	526
	101	143
	33.55	27.19
36-OHIO	667	4,098
	290	672
	43.48	16.40
37-OKLAHOMA	637	1,828
	143	240
	22.48	13.19
38-OREGON	315	1,294
	145	398
	46.03	30.76
39-PENNSYLVANIA	519	3,696
	318	634
	60.69	17.34
40-RHODE ISLAND	40	304
	38	164
	96.00	53.25
41-SOUTH CAROLINA	129	1,179
	44	131
	34.11	10.93
42-SOUTH DAKOTA	192	661
	98	174
	48.88	28.27
43-TENNESSEE	152	1,720
	54	151
	35.53	8.74
44-TEXAS	1,009	7,325
	281	872
	25.66	10.38
45-UTAH	43	628
	34	161
	79.07	25.64
46-VERMONT	290	302
	56	67
	19.31	17.09
47-VIRGINIA	155	1,918
	65	227
	41.94	17.49
48-WASHINGTON	303	1,666
	113	304
	37.95	18.49
49-WEST VIRGINIA	55	1,154
	27	63
	49.09	5.46
50-WISCONSIN	446	2,014
	269	470
	60.31	23.34
51-WYOMING	49	384
	32	62
	65.31	27.91
*** TOTAL ***	18,442	99,270
	6,461	13,918
	41.71	18.98

Figure VIIa

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Microcomputer Distribution By State

October 1982

	DISTRICTS	PUBLIC SCHOOLS
01-ALABAMA	130 49 37.69	1.397 123 8.80
02-ALASKA	52 2 3.85	414 2 0.48
03-ARIZONA	213 105 49.30	885 277 31.30
04-ARKANSAS	370 105 39.19	1.184 244 21.71
05-CALIFORNIA	1.030 611 59.98	7.274 2.048 28.16
06-COLORADO	188 148 78.38	1.243 538 43.28
07-CONNECTICUT	166 118 70.24	1.025 342 33.37
08-DELAWARE	19 15 78.95	172 93 54.07
09-DIST. OF COLUMBIA	8 4 50.00	100 11 11.35
10-FLORIDA	95 76 80.00	2.676 849 31.26
11-GEORGIA	208 91 43.75	1.822 333 18.28
12-HAWAII	7 0 0.00	231 0 0.00
13-IDAHO	115 56 48.70	583 112 20.25
14-ILLINOIS	1.035 656 63.38	4.044 1.344 34.67
15-INDIANA	300 229 76.11	1.989 712 35.80
16-IOWA	440 399 90.68	1.871 846 45.68
17-KANSAS	312 264 84.62	1.[illegible] 621 [illegible]
18-KENTUCKY	200 97 48.50	1.417 236 16.66
19-LOUISIANA	76 44 57.46	1.886 180 11.87
20-MAINE	269 112 41.64	764 214 28.01
21-MARYLAND	39 27 69.23	1.281 306 24.27
22-MASSACHUSETTS	416 243 58.17	1.874 553 29.51
23-MICHIGAN	563 398 72.74	3.681 1.287 34.98
24-MINNESOTA	478 413 86.95	1.472 934 63.48
25-MISSISSIPPI	150 51 34.20	991 121 12.66
26-MISSOURI	550 212 38.55	2.663 488 21.61
27-MONTANA	393 167 42.49	726 280 38.46
28-NEBRASKA	323 247 76.47	1.812 677 31.86
29-NEVADA	17 13 76.47	286 57 19.93
30-NEW HAMPSHIRE	212 63 29.72	443 136 30.70
31-NEW JERSEY	587 383 60.14	2.336 854 36.89
32-NEW MEXICO	94 57 60.64	426 167 39.20
33-NEW YORK	772 628 81.38	4.068 1.697 41.72
34-NORTH CAROLINA	145 104 71.72	2.031 501 24.67
35-NORTH DAKOTA	292 149 51.03	510 220 43.1[illegible]
[illegible]-OHIO	668 414 62.26	3.942 1.084 28.99
37-OKLAHOMA	630 241 38.01	1.801 423 23.49
38-OREGON	313 211 67.41	1.288 611 48.49
39-PENNSYLVANIA	515 407 79.03	3.499 981 27.46
40-RHODE ISLAND	40 32 80.00	296 109 36.49
41-SOUTH CAROLINA	113 49 43.36	1.181 148 12.28
42-SOUTH DAKOTA	192 138 71.88	630 222 34.88
43-TENNESSEE	190 67 64.67	1.693 226 13.38
44-TEXAS	1.089 488 44.81	9.330 1.442 27.88
45-UTAH	46 41 89.13	644 300 46.64
46-VERMONT	291 87 29.90	387 108 27.91
47-VIRGINIA	152 92 60.53	1.800 498 28.72
48-WASHINGTON	303 198 65.35	1.647 580 33.94
49-WEST VIRGINIA	55 37 67.27	1.130 117 10.28
50-WISCONSIN	446 361 80.94	1.998 798 40.88
51-WYOMING	49 43 87.76	376 181 48.16
*** TOTAL ***	15.314 9.265 60.37	82.482 24.696 29.98

Figure VIIb

(12)

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SUMMARY

The use of microcomputers in schools is growing very rapidly. While the availability of local funding and the larger sizes of schools and/or districts in which they belong are both factors that identify schools most likely to have microcomputers as last year, the smaller and less well funded schools are catching up quickly as shown by the much higher growth rates. While it is not apparent in this analysis, it is likely that there is rapid growth still in the schools that already have microcomputers, i.e., from one to several computers, more software, more course applications, teacher exposure and student contact.

Chapter II spending patterns, which are just beginning to become apparent, are likely to play a large role this year. Many school districts have more money to spend and the block grant imposes few restrictions on how it is spent. According to an article in Education Funding News so many Pennsylvania school districts are buying computers with Chapter II funds that a member of the State Deparment of Education calls the block grant the "Apple in every school bill". Block grant funds are distributed mainly by enrollment, so the funds will be widely available across the whole spectrum of schools, and private and Catholic schools are included in the distribution. Consequently, the market for microcomputers and related materials can be expected to grow fast in the current year, as in the past. Attached are some suggested ways the Market Data Retrieval data base can be used to reach desirable school microcomputer users or prospects.

Referenced attachments were not included with the document.

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